Biology Toolkit: Indicator 1.4.2

Student Handout: Biology: Indicator 1.4.2

Goal 1.0 Skills And Processes

Expectation 1.4 The student will demonstrate that data analysis is a vital aspect of the process of scientific inquiry and communication.

Indicator 1.4.2 The student will analyze data to make predictions, decisions, or draw conclusions.

Public Release - Selected Response Item - Released in 2009

Biology Indicator 1.4.2

Use the information below to answer the following item.

Methyl mercury is a toxic substance that can harm the nervous system. Some fish are contaminated with high levels of methyl mercury. In many places, these fish are an important food source. Experiments are being conducted to determine how many meals of contaminated fish can be safely consumed. The table below shows the concentration of methyl mercury in the fish and the number of meals that can be safely consumed per month.

METHYL MERCURY IN CONSUMABLE FISH

Concentration of Methyl Mercury in fish (ppm*)	Number of meals safely consumed per month
0.05	25
0.08	15
0.12	10
0.25	5
0.40	3
0.80	2

*ppm= parts per million

The table below shows the mean mercury concentrations in fish.

MERCURY CONCENTRATION IN FISH

Freshwater Fish	Mean concentration of Methyl Mercury (ppm*)	Average size of mature fish (length, mass)	
Common carp	0.11	30–63 cm	4.5 kg
Channel catfish	0.09	36–53 cm	9.0 kg
Largemouth bass	0.51	30–41 cm	1.2 kg
Yellow perch	0.26	38–46 cm	1.1 kg

*ppm= parts per million

According to this table, which fish would be safest to eat?

A. common carp
B. channel catfish
C. largemouth bass
D. yellow perch

Correct Answer
B. channel catfish

Item

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